

CLAIMS

1. A method of controlling the dimensional change to a predetermined value when sintering a compacted body of a powder mixture characterised by providing a first powder (A) consisting of an iron based powder(1) and copper in the form of elemental copper (2), or copper diffusion-bonded to said iron-based powder (3) ; providing a second powder (B) consisting of said iron-based powder (1) and a pre-alloyed iron-copper powder (4); wherein the copper content of powder B is made equal to the copper content of powder A either by adjusting the Cu content of the powder A or adjusting the copper content of powder B, whereby the copper content of powder B is adjusted either by adjusting the proportions between powder (1) and powder (4) or by adjusting the copper content of powder (4).
mixing said first and second powder mixtures (A) and (B) in proportions resulting in the desired dimensional change, adding graphite and lubricant and optionally hard phase materials and other alloying elements to the obtained mixture;
compacting the obtained mixture to a compacted body; and
sintering the compacted body.
2. The method according to claim 1 wherein the iron based powder (1) is an iron- molybdenum pre-alloyed powder.
3. A sintered powder metal compact produced according to the method of claim 1.